

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF RECEIPT OF RECORD COPY

(PCT Rule 24.2(a))

From the INTERNATIONAL BUREAU

To:

RECEIVED
WITH THANKS

18-12-2001

PAPULA

PAPULA OY
Papula Oy
P.O. Box 981
(Fredrikinkatu 61 A)
FIN-00101 Helsinki
FINLAND

Date of mailing (day/month/year) 10 December 2001 (10.12.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 15256F	International application No. PCT/FI01/01001

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

MYORIGO OY (for all designated States except US)
VAANANEN, Johannes (for US)

International filing date : 16 November 2001 (16.11.01)

Priority date(s) claimed :

Date of receipt of the record copy
by the International Bureau : 05 December 2001 (05.12.01)

List of designated Offices :

AP : GH,GM,KE,LS,MW,MZ,SD,SL,SZ,TZ,UG,ZM,ZW
EA : AM,AZ,BY,KG,KZ,MD,RU,TJ,TM
EP : AT,BE,CH,CY,DE,DK,ES,FI,FR,GB,GR,IE,IT,LU,MC,NL,PT,SE,TR
OA : BF,BJ,CF,CG,CI,CM,GA,GN,GQ,GW,ML,MR,NE,SN,TD,TG
National : AE,AG,AL,AM,AT,AU,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CO,CR,CU,CZ,DE,DK,DM,DZ,
EC,EE,ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KP,KR,KZ,LC,LK,LR,LS,LT,LU,
LV,MA,MD,MG,MK,MN,MW,MX,MZ,NO,NZ,PH,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,
UA,UG,US,UZ,VN,YU,ZA,ZW

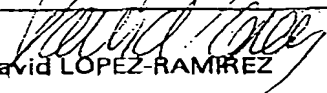
ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase
- ☒ confirmation of precautionary designations
- ☐ requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer:  David LOPEZ-RAMIREZ Telephone No. (41-22) 338.83.38
--	--

This Page Blank (uspto)

(19) World Intellectual Property Organization
International Bureau



10/049314

(43) International Publication Date
20 June 2002 (20.06.2002)

PCT

(10) International Publication Number
WO 02/047603 A3

- (51) International Patent Classification⁷: **A61K 31/50**, **A61P 15/10**
- (21) International Application Number: **PCT/FI01/01101**
- (22) International Filing Date:
14 December 2001 (14.12.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
20002755 15 December 2000 (15.12.2000) FI
- (71) Applicant (for all designated States except US): **ORION CORPORATION** [FI/FI]; Orionintie 1, FIN-02200 Espoo (FI).
- (71) Applicant and
(72) Inventor: **LILLEBERG, Jyrki** [FI/FI]; Sirkkalanmäki 32, FIN-00760 Helsinki (FI).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **LEHTONEN, Lasse** [FI/FI]; Kiiltokalliontie 6 B, FIN-02180 Espoo (FI). **PEN-TIKÄINEN, Pertti** [FI/FI]; Ritokalliontie 6 B, FIN-00330 Helsinki (FI).
- (74) Agent: **ORION CORPORATION**; Orion Pharma, Industrial Property Rights, P.O.Box 65, FIN-02101 Espoo (FI).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
30 January 2003
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 02/047603 A3

(54) Title: USE OF LEVOSIMENDAN FOR TREATING ERECTILE DYSFUNCTION

(57) Abstract: Levosimendan, or (-)-[4-(1,4,5,6-tetrahydro-4-methyl-6-oxo-3-pyridazinyl)phenyl]hydrazono]propanedinitrile, which has been previously suggested for the treatment of congestive heart failure is useful in the treatment of erectile dysfunction.

RECEIVED
MAR 14 2003
TECHNOLOGY CENTER 2800

This Page Blank (uspto)

INTERNATIONAL SEARCH REPORT

International Application No
PCT/FI 01/01101

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/50 A61P15/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

CHEM ABS Data, MEDLINE, EMBASE, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 92 12135 A (ORION YHTYMAE OY) 23 July 1992 (1992-07-23) the whole document ---	1,2
A	WO 91 16052 A (CAVALLINI GIORGIO) 31 October 1991 (1991-10-31) the whole document ---	1,2
A	WO 99 21558 A (VIVUS INC) 6 May 1999 (1999-05-06) the whole document -----	1,2

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

2 September 2002

Date of mailing of the international search report

25. 09. 2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Eva Johansson

INTERNATIONAL SEARCH REPORT

International application No.
PCT/FI 01/01101

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 2
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Claims Nos.: 2

Claim 2 relates to a method of treatment of the human or animal body by surgery or by therapy/ a diagnostic method practised on the human or animal body/ Rule 39.1 (iv). Nevertheless, a search has been executed for this claim. The search has been based on the alleged effects of the compounds/compositions.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/FI 01/01101

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9212135	A	23-07-1992	AT 119525 T 15-03-1995
			AU 645399 B2 13-01-1994
			AU 1153592 A 17-08-1992
			BG 62002 B1 30-12-1998
			BG 97915 A 25-04-1994
			BR 1100737 A3 21-03-2000
			CA 2099262 A1 04-07-1992
			CA 2314115 A1 04-07-1992
			CY 1878 A 05-04-1996
			DE 69201640 D1 13-04-1995
			DK 565546 T3 22-05-1995
			EE 2946 B1 16-12-1996
			EP 0565546 A1 20-10-1993
			ES 2070627 T3 01-06-1995
			FI 932618 A 09-06-1993
			FI 972077 A 15-05-1997
			WO 9212135 A1 23-07-1992
			GB 2251615 A ,B 15-07-1992
			HK 117395 A 28-07-1995
			HR 921251 A1 31-08-1995
			HU 64754 A2 28-02-1994
			IE 920002 A1 15-07-1992
			IL 100553 A 31-12-1995
			IL 114028 A 12-09-1996
			JP 5015748 B2 06-03-2000
			JP 9183767 A 15-07-1997
			JP 2635445 B2 30-07-1997
			JP 6504275 T 19-05-1994
			KR 207145 B1 15-07-1999
			LU 90920 A9 17-07-2002
			LV 11174 A 20-04-1996
			LV 11174 B 20-12-1996
			NO 932367 A 28-06-1993
			NZ 241194 A 25-06-1993
			PL 169435 B1 31-07-1996
			PL 169415 B1 31-07-1996
			RO 111847 B1 28-02-1997
			RU 2118317 C1 27-08-1998
			SI 9112003 A 31-10-1998
			US 5424428 A 13-06-1995
			US 5569657 A 29-10-1996
			US 5512571 A 30-04-1996
			ZA 9200047 A 28-10-1992
WO 9116052	A	31-10-1991	IT 1252603 B 19-06-1995
			AU 7680691 A 11-11-1991
			CA 2080825 A1 20-10-1991
			WO 9116052 A1 31-10-1991
			EP 0525010 A1 03-02-1993
			US 5336678 A 09-08-1994
WO 9921558	A	06-05-1999	US 6037346 A 14-03-2000
			AU 734734 B2 21-06-2001
			AU 1125499 A 17-05-1999
			CA 2305394 A1 06-05-1999
			EP 1027054 A1 16-08-2000
			WO 9921558 A2 06-05-1999
			US 6156753 A 05-12-2000

Information on patent family members

PCT/FI 01/01101

Form PCT/ISA/210 (patent family annex) (July 1992)

EPM TC 2600
FINAL SEARCH DATE
DELIVER TO GOVT DATE

This Page Blank (uspto)


EPM TC 2600
FINAL SEARCH DATE 1-6-04
DELIVER TO GOVT DATE